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Iron County Soil & Water Conservation District

UNIVERSITY OF MISSOURI Extension
conserving natural resources for our future

Quarterly Newsletter

January, February, March 2013

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Preserving Soil & Water through Conservation

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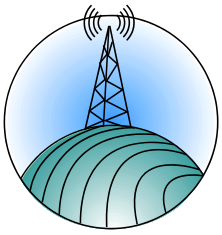
Volunteer Recruitment



The Iron County Emergency Volunteer Recruitment Team of Iron County is looking for volunteers to train for emergency situations in the county. In times past disaster situations have occurred in our county due to flooding or tornadoes. When this happens we rely on our trained emergency personnel to assist us. We are also blessed with our county citizens' strong history of coming together to help during a crisis, and the team would like to offer training to assist our citizens in being more prepared. Through education, training, and volunteer service we can make our communities safer and stronger.

The Iron County Emergency Volunteer Recruitment Team was formed to recruit citizens for training for emergencies. At this time we are recruiting volunteers in the following areas:

- Shelter Operations with the American Red Cross
- Emergency Feeding with the American Red Cross
- Damage Assessment Teams Trained by the American Red Cross
- Amateur Radio Operators (HAM) Training with Certified Operators
- CERT (Community Emergency Response Team) Training—Taught by certified trainers, this program educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills.
- Disaster Counselors - Training by Lutheran International Headquarters and local professional Counselors

Quote from FEMA: Securing our safety requires all citizens to work together. Every American has a shared responsibility and a critical role to play in **Emergency Preparedness.**

The team would like to recruit all citizens of Iron County, from our youth to our senior citizens. Potential volunteers can call one of the following numbers to sign up for training in their area of interest or for more information. Once we have enough volunteers for a specific training, we will set up the training.

573-697-5000 - Phyllis Macalady, Project Coordinator
573-546-7515 - Elaine Willhite, University of Missouri Extension Office

Vegetable Planting Calendar University Extension guide (G6021) provides nutritional information on vegetables, planting depth, days to planting, the approximate amount to plant per person and varieties of vegetables. In selecting the varieties, the primary consideration is yield, quality and disease resistance as experienced under Missouri conditions. Because we live in the Ozark Plateau area, we use the "north" planting dates that are listed, which brings later spring and earlier fall frosts, due to the higher elevation in our area. Call 573-546-7515 for a copy of this guide.

Epizootic Haemorrhagic Disease and Bluetongue Viruses: Can Cattle Be Infected by Them?

By Scott Poock, CA Veterinarian

There have been a number of inquiries on finding dead deer on properties this fall. The assumption is that the deer have died from Epizootic Haemorrhagic Disease (EHD) or Bluetongue (BTV). Late summer and autumn tends to be the time of year that deer would be dying from EHD or BTV. Thus, there is a concern of whether the deaths of the deer would have an impact on the cattle populations.

Biting midges are 1-2 mm long, with a small head, long antennae and segmented palps. The thorax is often black spotted and contains a distinctive set of small depressions called the "humeral pits" just posterior of the head on the upper thorax. Biting midges have long legs and wings that fold over the thorax when at rest. Only the females take blood meals and normally swarm and bite in the early morning or late evening, especially during overcast weather.

The viruses EHD and BTV can infect most wild and domestic ruminants. Clinical signs are seen mainly in white tailed deer, with mule deer and pronghorn antelope affected to a lesser extent. Other wild animals found to be seropositive include black-tailed deer, red deer, wapiti, fallow deer, and roe deer. Rare outbreaks of EHD have been reported in cattle. Sheep can be infected experimentally, but rarely develop clinical signs, and goats do not seem to be susceptible to infection. Neither of these viruses affect humans, dogs, nor cats.

Epizootic Haemorrhagic Disease and BTV are caused by viruses which are very similar. Both viruses are most commonly transmitted from animal to animal by an insect known as a midge (genus Culicodes). Midge insects actually prefer to feed on cattle rather than sheep. Therefore, one strategy for decreasing BTV in sheep is to have cattle mixed with the sheep. Bluetongue and EHD transmission is enhanced by high temperatures, and we had plenty of these in 2012. These viruses are known as non-contagious, but infectious. That means they can cause disease, but typically do not transfer directly from animal to animal contact.

Sheep are sensitive to the Bluetongue virus, but not so to EHD. Cattle usually only show subclinical signs when infected by both of these viruses. Each of the viruses has a number of varieties. Several serotypes of EHD and BTV have been reported as causing clinical disease in cattle. Disease usually happens in cattle that are naïve to the virus. Naïve cattle exposed to BTV have an increased chance of abortion or short gestation, depending upon the timing of the infection. As of 2011, very few cases of EHD have been confirmed in cattle in North America. However, there have been cases reported in Pennsylvania, Nebraska, and several other states. In other countries (Asia, Turkey, Israel, Africa), symptoms include fever, loss of appetite, difficulty swallowing, lameness, and potential reproductive losses. The clinical cases that have occurred in the USA have had excessive salivation or drooling, cloudy nasal discharge, moderate to severe lameness, poor appetite, fever, udder lesions, and a drop in milk production. Typically there are hemorrhages in the tissues of the mouth with most animals developing erosions and ulcers. Abortions in cattle may occur if the viruses invade the calf in-utero at certain stages of gestation (70-120 days for EHD). Researchers have found that deer surviving infection with EHD develop long term antibodies which may confer herd immunity.

Samples to collect in deer (the preferred tissues for virus isolation) are spleen, lymph node, and unclotted whole blood in EDTA or heparin. Other useful samples may include serum (for serology), liver, and lung. Both fresh and fixed tissues should be collected if possible. Samples for virus isolation should be transported under refrigeration. In cattle, blood should be collected into non-coagulating tube (i.e., calcium citrate, EDTA, or heparin) and sent chilled for virus isolation or RT-PCR. Paired serum samples should also be collected if possible.

There is a BTV vaccine that is effective for sheep. However, it may cause mild to severe clinical disease, decrease milk production, cross the placenta and cause abortions, short periods of reduced semen quality, suppression of white blood cells in goats, and secretion of virus in semen of older bulls and rams. There is an unproven vaccine for deer farmers against EHD and BTV.

Given all the above, what type of strategies can be used to decrease the chance of infecting cattle and/or sheep?

*Avoid low-lying wet pastures

*Stabling the animals between dusk and dawn, as the midge feed primarily in the early morning and evening, plus the insect does not enter buildings

*Control insects, research suggests the midge is sensitive to pyrethroids

*Be cautious of utilizing needles on multiple animals, as well as other equipment that may become contaminated with blood and transferred to another animal.

All in all, controlling insects on cattle and making sure you don't expose naïve animals to areas where EHD and BTV are known to exist, offer the best approaches to decreasing the chance of

No-till Drill
Available to Rent
$8.00 per Acre

Call 573-546-6518
For more information

Soil test kits are available through the Extension office

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Soil Savers Corner

It is still a little early for actual gardening, but kids can get started with seeds and soil by making a grass planter. All you need is a plastic or styrofoam cup, enough soil to fill it, and a pinch of grass seed. Start by having the kids draw a face on the cup, using crayons or indelible markers. Fill with soil, and spread about a tablespoon of grass over the surface. Water well, and put your cup in a sunny window. After the grass sprouts, kids can give the grass a 'haircut', or even (gently) make a ponytail. Add earrings or a mustache to the face, or try making a green haired monster!

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February is here, and the time is coming to start tomato and pepper seeds. Sow the seeds in March so they will be ready to plant out in May. Use good potting mix or seed starting mix: avoid potting soil, which may be too heavy to allow seeds to sprout well. To ensure strong, healthy seedlings, you need to have supplemental light—regular florescent shop lights work well, and the light bulb should be only an inch or two above the plants. Raise the light as the seedlings grow. A fan set to blow gently on the seedlings will make the stems stronger and will help fight disease. When the air temperature rises later in the spring, plants can be set outside to harden off—be sure to bring them in or cover if the temperature drops. For more information, call the Iron County Extension office, and we will send you a free guidesheet on starting plants from seed.

Realizing the Risks of Radon

by Kandace Fisher, MS, Housing and Environmental Design Specialist, St. Louis County, University of Missouri Extension

Radon is a gas you cannot smell, taste or see, and it is dangerous when it accumulates in your home. However, it can be detected to keep your family safe.

According to the Environmental Protection Agency (EPA), radon is found everywhere in the United States. It comes from the natural breakdown of uranium in soil, rock and water. The National Cancer Institute states radon exposure is the second leading cause of lung cancer in the United States, being second only to cigarette smoking. Approximately 15,000 to 22,000 deaths per year are related to radon exposure.

Radon gas moves through the ground and into your home through gaps, cracks and holes in the foundation. It can also get into the water supply of your home. Once the radon gas is in your home it can build up to dangerous levels.

The only way to know if radon is present is to have your home tested. The good news is that testing is relatively easy and inexpensive. With families spending most of their time indoors during the winter months, this is a very good time to test your home. Radon levels will change depending on weather though, so any time of the year is a good time to think about testing your home. Here are steps for testing your home for radon.

Missouri residents can obtain a free radon test kit from the Missouri Department of Health and Senior Services. An application form is available at health.mo.gov/living/environment/radon/testkit.php. You can also purchase a low-cost radon test kit from your local hardware store.

Follow the test kit instructions. Windows and doors should remain closed during the testing period. Place test kit on the lowest lived-in level of your house. If you frequently use the basement, test there. If not, test on the first floor of your home. The EPA recommends testing in a frequently used room, like a bedroom, den or playroom, but not in the kitchen or bathroom.

Send test findings to the lab specified on the package for analysis. Test results should come back in a few weeks. Radon is measured in picocuries per liter of air or pCi/L. If results indicate a level of 4 pCi/L or higher, you should have a professional perform a follow-up, long-range test.

If levels continue to read high, a radon mitigation system will need to be installed in your home. According to the EPA, several methods exist to reduce radon levels in your home. One common method is to use a vent pipe system and fan, which pulls radon from the soil under the foundation and vents it outside above the house. This system is known as a soil suction radon reduction system and does not require major changes to your home. Radon contractors may use a variety of methods. The right method may depend on the design of your home. In addition to installing the mitigation system, a contractor will recommend sealing any foundation cracks and openings in your home. The cost of reducing radon in the home can vary greatly. The good news is that radon levels can be reduced by up to 99 percent.

To locate a professional in Missouri who specializes in radon testing and mitigation, contact:
Bureau of Environmental Epidemiology
Missouri Department of Health and Senior Services
930 Wildwood, P.O. Box 570, Jefferson City, MO 65102-0570
Phone: 573-751-6160 or 1-866-628-9891
Email: info@dhss.mo.gov

MO DHSS radon website: http://health.mo.gov/living/environment/radon/index.php
For more information or to find a professional in another state, refer to the EPA's radon website. You can also refer to the EPA publication *Consumer's Guide to Radon Reduction*.

Grazing Management

Grazing Systems, through the Cost-Share Program, have been of growing interest to the landowners of Iron County. The Grazing System applies to pastureland where permanent vegetative cover is established and can be enhanced through the use of a planned grazing system. **DSP 3.1** water development, includes a pond or well construction for livestock watering. **DSP 3.2** water distribution, includes components needed to install a pipeline and water tank. **DSP 3.3** fencing, to create or intensify a grazing system. **DSP 3.4** lime application. **DSP 3.5** seeding, consisting of interseed legumes for permanent vegetative cover.

Grazing school provided by the University of Missouri is a requirement for the system operator. The grazing school schedule is not yet available, but you may call the Iron County SWCD office at 573-546-6518 and we will notify you when it is available.

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*Radon Testing
*Haemorrhagic Disease
*Emergency Volunteer Recruitment

Cooperator Spotlight

The Missouri Association of Soil & Water Conservation Districts selected Dan & Colleen Jarvis as the recipients of the Grassland Farmer of the Year award for 2012. They were honored at the training conference at Tan-Tar-A in November. They own and operate 1,092 acres at High Valley Ranch. They have worked hard bringing their property to its current condition, including perimeter fencing, cross fencing, filling gullies, seeding and over-seeding pastures, installing watering tanks, installing ponds, repairing eroded spillways, installing cattle working facilities, planting 3,500 pine seedlings, spraying noxious weeds, liming and fertilizing. Participation in various practices through the Cost-Share Program and EQIP have been very beneficial. Dan said, "The drought this past year was a challenge, but it was less complicated due to the rotational grazing system and pond/well watering systems we installed in partnership with the Missouri Soil and Water Districts."

In 2008, the Missouri Tree Farm Committee awarded them the Regional Tree Farmer of the Year for Region 8. In 2005, Dan & Colleen were selected as Iron County Conservation Farmer of the Year by Iron County SWCD. In 2004, he formed High Valley Hydropower Consulting and has worked throughout the U.S., Canada and in Siberia.

Dan retired from Ameren UE after 33 years as an electrical engineer. He managed all three Ameren UE hydropower plants: Taum Sauk, Keokuk, Iowa (on the Mississippi River) and Osage (Bagnell Dam) at Lake of the Ozarks. He spent 3 and a half years consulting the Taum Sauk Project for the rebuilding of the reservoir. Nationally, Dan was Chairman of Edison Electric Institute's Hydraulic Power Committee and had the opportunity to visit hydropower plants across the U.S. Dan also served on the Board of Directors for the National Hydropower Association and was the recipient of the prestigious Henwood Award given nationally for lifetime achievement in the hydropower industry.

Dan & Colleen raise Registered Black Angus Bulls and Heifers and are members of the Missouri Angus Association and the American Angus Association. They will participate for the first time at the upcoming Show-Me-Select Heifer program and sale in southeast Missouri. In the past, they have hosted farm tours for rotational grazing and for timber management erosion control. The Jarvis' enjoy farming and improving their land.

Missouri Wins Canon Envirothon

A five-member team of high school students from Pembroke High School in Kansas City, MO won the 2012 Envirothon, a week-long environmental education competition sponsored by Canon U.S.A., Inc., a leader in digital imaging solutions. Winning teams from across 44 states, nine Canadian provinces and one Canadian territory competed in written tests and oral presentations in natural resource categories such as soils and land use, aquatic ecology, forestry, and wildlife. Competition included more than 500,000 high school students. First place team received $25,000 in Canon scholarships.